BID FORM

### MISSOURI DEPARTMENT OF TRANSPORTATION

### GENERAL SERVICES 830 MoDOT DRIVE - P.O. BOX 270 JEFFERSON CITY, MO 65109

REQUEST NO	).	2-080520BT1
DATE	***	May 6, 2008
PAGE NO.	1	NO. OF PAGES

	JEFFERSU	N CIII, MO	13107	1	
	D BIDS, SUBJECT TO THE ATTACHED CO	NDITIONS WILL	BIDS TO BE BASI		URI DEPARTMENT OF
BE REC	CEIVED AT THIS OFFICE UNTIL	e e	Submit net bid as car	TRANSPORTAT	FION ions will not be considered
	2:00 p.m., Local Time, May 20	. 2008	B '	ious MoDOT I	
AND TI	HEN PUBLICLY OPENED AND READ FOR	•	·		
	DLLOWING SUPPLIES OR SERVICES.				
DEFINI FOR OF	TE DELIVERY DATE SHOULD BE SHOW PENING. ALL BIDS SHOULD BE EXTEN	N. THE BIDDER I DED AND TOTA	MUST SIGN AND RI L <b>ED.</b>	ETURN BEFORE I	DATE AND TIME SET
BUYE			BUYER TELEP	PHONE: 573	- 751-7482
	BUYER EMAIL:	•			
	Brenda.Tyree@modot.mo.gov				
		SUPPLIES	OR SERVICES		
	The Co	TED CAT CITE	M CIII ODIDE	(DDV)	
	BAGG	ED CALCIU	M CHLORIDE	(DRI)	
	To establish a contract to furnish '	Bagged Calci	um Chloride (T	)rv)" with an e	effective date of
-	Notice to Proceed and ending May				
	Thouse to 1100000 and one ing 1120.	,,			`
·					. •
					•
	Components of Agreement: The Agree any written amendments thereto, the "Sta Terms and Conditions" that are attached post-award contract agreement signed be relationship in writing and such written of stated in the RFB or the Bidder's bid. The without further clarification.	andard Bid/Propose to this RFB, the between the parties. clarification shall	sal Provisions, General submitted by the However, MHTC govern in case of co	eral Terms and Co Bidder in respon- reserves the right onflict with the ap	onditions and Special se to the RFB and the to clarify any plicable requirements
	Return sealed bid	to the addre	ess shown at t	he top of th	is page.
	(SEE ATTACHED I	FOR CONDIT	IONS AND INS	TRUCTIONS)	)
In com	apliance with the above Request For Bid, and any or all the items on which prices were bid	subject to all condi within the timefran	tions thereof, the und ne specified herein, a	lersigned bidder ag fter receipt of form	rees to furnish and deliver aal purchase order.
Date:		Firm	Name:		
Teleph	none No.:	Addr	ess:		
Fax No		· · · · · ·			
	al I.D. No.		ignature):		
Email	Address:	Туре	Print Name		
	•	Title:			
Is your	r firm MBE Yes No	Is you certif	ır firm WBE ied?	Yes	☐ No

Form E-103 (Rev. 11-04)

#### 1. INTRODUCTION AND GENERAL INFORMATION

#### 1.1 Introduction:

1.1.1 This Request For Bid seeks bids from qualified organizations to provide Bagged Calcium Chloride (Dry) to various locations within the State of Missouri with an effective contract period of Notice to Proceed through May 31, 2009, to the Missouri Highways and Transportation Commission (MHTC) and Missouri Department of Transportation (MoDOT). Each bid must be mailed in a sealed envelope to Ms. Brenda Tyree, General Services Procurement Unit, 830 MoDOT Drive, P.O. Box 270, Jefferson City, Mo 65109, or hand-delivered in a sealed envelope to the General Services Procurement Office in the Highway and Transportation Building at 830 MoDOT Drive, Jefferson City, Missouri. All questions regarding the RFB shall be submitted to Ms. Brenda Tyree. Bids must be returned to the office of Ms. Brenda Tyree no later than 2:00 p.m., CDT, May 20, 2008.

#### **RFB** Coordinator:

Ms. Brenda Tyree, Procurement Agent Missouri Department of Transportation 830 MoDOT Drive Jefferson City, MO 65109

PHONE:

573-751-7482

FAX:

573-526-1218

#### 1.2 General Information:

- 1.2.1 This document constitutes an invitation for competitive, sealed bids for the procurement of Bagged Calcium Chloride (Dry) as set forth herein.
- 1.2.2 Organization This document, referred to as a Request for Bid (RFB), is divided into the following parts:
  - 1) Introduction and General Information
  - 2) Scope of Work
  - 3) Bid Submission
  - 4) Pricing Page(s)
  - 5) Signature Page(s)
  - 6) Terms and Conditions

#### 2. SCOPE OF WORK

#### 2.1 General Requirements:

- 2.1.1 The contractor shall provide Bagged Calcium Chloride (Dry) on an as needed, if needed basis for the Missouri Highway and Transportation Commission (MHTC) and Missouri Department of Transportation (MoDOT), in accordance with the provisions and requirements stated herein.
- 2.1.2 The contractor shall provide all deliverables/services to the sole satisfaction of MoDOT.
- 2.1.3 MoDOT estimates, but does not guarantee, the purchase of the estimated quantities stated herein on Attachment A.
- 2.1.4 MoDOT reserves the right to obtain "like or similar" products as specified herein from other manufacturers, exclusive of the contract, when use of such products is deemed in the best interest of MoDOT.
- 2.1.5 The contractor shall insure that all materials, equipment, and/or services specified herein complies with MoDOT Specification ## MGS-92-06D, Attachment B, and any other provisions outlined in this document.
- 2.1.6 Unless otherwise specified herein, the contractor shall furnish all material, labor, facilities, equipment, and supplies necessary to provide the deliverables/services required herein.

#### 2.2 Delivery Requirements:

- 2.2.1 The contractor shall deliver Bagged Calcium Chloride (Dry) as specified herein to various locations as specified on Attachment C elsewhere herein.
- 2.2.2 The contractor shall deliver Bagged Calcium Chloride (Dry) within fifteen (15) calendar days after the order is placed. In the event the fifteenth (15th) calendar day is a Saturday, Sunday or Holiday, the delivery shall be accomplished on the next normal workday.
- 2.2.3 The contractor shall make shipments in truckload lots (approximately 22 tons per load). The contractor shall deliver the Bagged Calcium Chloride (Dry) on pallets. Pallet loads are to be accessible from the side or rear of the transporting vehicle for the unloading by means of a forklift. The contractor, or driver, of transporting vehicle shall deliver pallets to the side or rear of the vehicle by providing a hand-operated dolly for this purpose.
- 2.2.4 The contractor shall understand and agree that MoDOT personnel shall unload bagged calcium chloride (dry) during normal working hours only (7:30 a.m. 4:00 p.m. Monday through Friday) provided the MoDOT Representative at the delivery point is given at least twelve (12) hours advance notice prior to arrival at the delivery point.

#### 2.3 Liquidated Damage Requirements:

- 2.3.1 The contractor shall agree and understand that providing the Bagged Calcium Chloride (Dry) in accordance with the requirements stated herein is considered critical to the efficient operations of MoDOT. However, since the amount of actual damages would be difficult to establish in the event the contractor fails to comply with the contractual requirements, the contractor shall agree and understand that the amount identified below as liquidated damages shall be reasonable and fair under the circumstances.
  - a. In the event the contractor fails to provide the Bagged Calcium Chloride (Dry) in accordance with the contractual requirements specified herein, the contractor shall be assessed liquidated damages in the amount of \$250.00 per day for each such delinquent day.

- b. The contractor shall further agree and understand that such liquidated damages shall either be deducted from the total amount due the contractor or paid by the contractor as a direct payment to MoDOT, at the sole discretion of MoDOT.
- c. The contractor shall agree and understand that the liquidated damages described herein shall not be construed as a penalty.
- d. The contractor shall agree and understand that all assessments of liquidated damages shall be within the discretion of the State of Missouri and shall be in addition to, not in lieu of, the rights of the State of Missouri to pursue other appropriate remedies.
- e. The contractor shall agree and understand that all assessments of liquidated damages shall be within the discretion of each District as a separate entity, and shall be in addition to, not in lieu of, the rights of the State of Missouri to pursue other appropriate remedies. The contractor shall agree and understand that each District's decision shall be individual, final, and without recourse.

#### 2.4 Invoicing and Payment Requirements:

- 2.4.1 The contractor shall submit an itemized invoice to the applicable requesting address for the completion of deliverables, as specified herein.
- 2.4.2 The contractor shall be paid in accordance with the firm, fixed prices stated on the pricing page of this document after completion of deliverables specified herein and acceptance by MoDOT.
- 2.4.3 Other than the payment specified above, no other payments or reimbursements shall be made to the contractor for any reason whatsoever.

#### 2.5 Other Contractual Requirements:

- 2.5.1 Contract Period The contract shall commence from the date of award until May 31, 2009.
- 2.5.2 Inspection Specifications MoDOT reserves the right to inspect the material at the point of manufacture, intermediate storage point, or at a destination which shall be at the discretion of MoDOT.
- 2.5.3 Escalation Clause In the event the contractor requests a price increase during the contract period, the contractor must provide a written request and documentation justifying the need for a price increase, and the amount of such price increase. MoDOT will review the contractor's written request and documentation, and decide if a price increase is to be granted at that particular time. The contractor shall understand and agree that MoDOT's decision shall be final and without recourse.
  - a. No price increase shall be granted during the first 3 months of the original contract period.

#### 3. BID SUBMISSION

#### 3.1 Bid Submission Information:

- 3.1.1 All bids must be received in a sealed envelope clearly marked "Bagged Calcium Chloride (Dry)".
- 3.1.2 All bids must be received at the following address no later than May 20, 2008 at 2:00 p.m., CDT.

The Missouri Department of Transportation General Services – Procurement Division Attn: Brenda Tyree 830 MoDOT Drive Jefferson City, MO 65109

3.1.3 The bidder may withdraw, modify or correct his bid after it has been deposited with the MoDOT provided such request is submitted in writing and received at the location designated for the bid opening prior to the time specified for opening bids. Such a request received as specified will be attached to the bid and the bid will be considered to have been modified accordingly. No bid may be modified after the time specified for the opening of bids.

#### 3.1.4 Open Competition / Request For Bid Document:

- a. It shall be the bidder's responsibility to ask questions, request changes or clarification, or otherwise advise MoDOT if any language, specifications or requirements of an RFB appear to be ambiguous, contradictory, and/or arbitrary, or appear to inadvertently restrict or limit the requirements stated in the RFB to a single source. Any and all communication from bidders regarding specifications, requirements, competitive bid process, etc., must be directed to the buyer from MoDOT, unless the RFB specifically refers the bidder to another contact. Such communication should be received at least three (3) working days prior to the official bid opening date.
- b. Every attempt shall be made to ensure that the bidder receives an adequate and prompt response. However, in order to maintain a fair and equitable bid process, all bidders will be advised, via the issuance of an amendment to the RFB, of any relevant or pertinent information related to the procurement. Therefore, bidders are advised that unless specified elsewhere in the RFB, any questions received less than three (3) working days prior to the RFB opening date may not be answered.
- c. Bidders are cautioned that the only official position of the State of Missouri is that which is issued by MoDOT in the RFB or an amendment thereto. No other means of communication, whether oral or written, shall be construed as a formal or official response or statement.
- d. MoDOT monitors all procurement activities to detect any possibility of deliberate restraint of competition, collusion among bidders, price-fixing by bidders, or any other anticompetitive conduct by bidders which appears to violate state and federal antitrust laws. Any suspected violation shall be referred to the Missouri Attorney General's Office for appropriate action.

#### 3.1.5 Proposal/Bid Guaranty/Contract Bond:

- a. Each bid/proposal shall be accompanied by a Bid Bond, Certified Check, Cashier's Check or Bank Money Order payable to the Director of Revenue Credit State Road Fund for an amount equal to Five Percent (5%) of the amount of the BID submitted. This is to act as a guarantee that the bidder, if awarded the contract, will furnish an acceptable performance and payment bond (Contract Bond) or a cashier's check, a bank money order or a certified check made payable to "Director of Revenue--Credit State Road Fund" in an amount equal to One Hundred (100%) of the contract price.
- b. If a BID BOND is used (in lieu of a certified check, cashier's check, or bank money order), it must be in the form provided and executed by the bidder as principal and by a surety company authorized to do

- business in the State of Missouri as surety. The agent executing the same on behalf of the surety company must attach a current Power of Attorney setting forth his authority to execute the bond involved.
- c. Certified Checks, Cashier's Checks or Bank Money Orders of unsuccessful bidders will be returned as soon as the award is made. The checks or bank money orders of the successful bidder(s) will be retained until the contract is executed and a satisfactory Performance and Payment (Contract Bond) is furnished. Bid Bonds will not be returned except on specific request of the bidder.
- 3.1.6 Bids will be reviewed to determine if the bid complies with the mandatory requirements, and to determine the lowest and best bid.
- 3.1.7 Cost Determination The low bid shall be determined by adding the firm, fixed prices within each category on the pricing page to obtain a total price for each bidder.
- 3.1.8 Contract Award The contract will be awarded to the lowest responsive bidder determined as specified above.
  - a. Award of this bid will be made on a "Category-by-Category" basis using the "lowest and best" principle of award.
- 3.1.9 The MHTC reserves the right to reject any or all bids and no award is final until formally approved by the MHTC.
- 3.1.10 **NOTE:** The bidder must be in compliance with the laws regarding conducting business in the State of Missouri. Within ten (10) business days of notification, the bidder will need to provide a copy of his/her Missouri Secretary of State's "Certificate of Good Standing" prior to the issuance of any contract or initial purchase order by MoDOT.

#### 4. PRICING PAGE

4.1 BAGGED CALCIUM CHLORIDE (DRY) – The bidder shall provide firm, fixed prices in the table below for providing the deliverables in accordance with the provisions and requirements of this RFB. All costs associated with providing the required deliverables shall be included in the prices stated below.

	FLAKE	
Item	Commodity Code & Description	Firm, Fixed Price
#		50-60# bags
001	7754577332 - Bagged Calcium Chloride (Dry) - Flake	\$ per ton
002	7754577332 - 5-Ton Lots <b>Flake</b> (Bags) F.O.B. Missouri Warehouse(s)	\$ per ton
003	7754577332 - Less Than 5-Ton Lots Flake (Bags) F.O.B. Missouri Warehouse(s)	\$ per ton
	PELLET	
Item #	Commodity Code & Description	Firm, Fixed Price
т-		50-60# bags
004	7754577328 - Bagged Calcium Chloride (Dry) – Pellet	\$per ton
005	7754577328 - 5-Ton Lots <b>Pellets</b> (Bags) F.O.B Missouri Warehouse(s)	\$ per ton
006	7754577328 - Less Than 5-Ton Lots <b>Pellets</b> (Bags) F.O.B Missouri Warehouse(s)	\$ per ton
Locatio	on of Warehouse(s) in Missouri	
Brand ?	Name	

#### ANTI-COLLUSION STATEMENT

STATE OF	CC.	• .		
COUNTY OF	SS.			
	·	<del>.</del>		eing first
duly sworn, deposes and says that he is Title o	f Person Signing		· · · · · · · · · · · · · · · · · · ·	
of				
01				
Name of Bi	idder	<del> </del>		<del></del> -
person, firm, association, or corporation making sa agreement, participated in any collusion, or otherw.	aid bid) has not, of ise taken any action	either directly on in restraint	or indirectly,	entered into
person, firm, association, or corporation making sa agreement, participated in any collusion, or otherw connection with such bid or any contract which may re Affiant further certifies that bidder is not financially in	aid bid) has not, of ise taken any actions accept	either directly on in restraint tance.	or indirectly, of free comp	entered into petitive biddin
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person, firm, association, or corporation making sa agreement, participated in any collusion, or otherw connection with such bid or any contract which may re Affiant further certifies that bidder is not financially in	aid bid) has not, or ise taken any actions taken any actions accept the same a	either directly on in restraint tance. ancially affiliat	or indirectly, of free comp	entered into petitive bidding ther bidder for
that all statements made and facts set out in the bid for person, firm, association, or corporation making satisfactory agreement, participated in any collusion, or otherword connection with such bid or any contract which may reach a such as a su	aid bid) has not, or ise taken any actions taken any actions accept the same a	either directly on in restraint tance.	or indirectly, of free comp	entered into petitive bidding ther bidder for
person, firm, association, or corporation making sa agreement, participated in any collusion, or otherw connection with such bid or any contract which may re Affiant further certifies that bidder is not financially in	aid bid) has not, or ise taken any actions taken any actions accept the same a	either directly on in restraint tance.	or indirectly, of free comp	entered into petitive bidding ther bidder for
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## PREFERENCE IN PURCHASING PRODUCTS

The bidders attention is di- corporations, firms, and in	rected to Section 34.076 RSMo 2000 which give dividuals when letting contracts or purchasing pr	s preference to Misso roducts.
Bids/Quotations received	will be evaluated on the basis of this legislation.	
All vendors submitting a	bid/quotation must furnish ALL information	requested below.
FOR CORPORA	TIONS:	
State in wh	ich incorporated:	
FOR OTHERS:	,	
State of do	micile:	
FOR ALL VEND	ORS:	
List addres	s of Missouri offices or places of business:	
		·
		· · · · · · · · · · · · · · · · · · ·
		ton the second
THIS	SECTION MUST BE COMPLETED AND SIGNED:	
M NAME:		
RESS:		
Y:	STATE:	ZIP:
•		
ral Tax I.D. #:	if no Federal Tax I.D. # - list Social Sec	eurity #:

NOTE: For bid/quotation to be considered, the "Preference in Purchasing Products" form must be on file in the General Services (Procurement) Division and must be dated in the current calendar year.

#### MISSOURI DOMESTIC PRODUCTS PROCUREMENT ACT

The bidder's attention is directed to the Missouri Domestic Products Procurement Act, Sections 34.350 to 34/359, RsMO, which requires all manufactured goods or commodities used or supplied in the performance of this contract or any subcontract to be manufactured or produced in the United States.

Section 34.355, RsMO, requires the vendor or contractor to certify his compliance with Section 34.353 and, if applicable, Section 34.359, RsMO, at the time of bidding and prior to payment. Failure to comply with Section 34.353, RsMO, during the performance of the contract and to provide certification of compliance prior to payment will result in nonpayment for those goods or commodities.

Section 34.353.2, RsMO, specifies that it does not apply where the total contract is less than Twenty-Five Thousand Dollars (\$25,000.00). If your total bid is Twenty-Five Thousand Dollars (\$25,000.00) or more, you **must** complete this form as directed below.

pr	oduc	ts listed in the bid	are not manufactured or produced in the United States, and the bid will be evaluated on that basis. ion appearing below on this form.						
[	].	If all the goods or products specified in the attached bid which the bidder proposes to supply to the State shall be manufactured or produced in the "United States" as defined in Section 34.350, RsMO, check the box at left.							
E	]	If only one item of any particular goods or products specified in the attached bid is manufactured or produced in the "United States" as defined in Section 34.350, RsMO, check the box at left and list the items (or item number) here:							
	]	not manufactured left; (b) list below manufactured or	e goods or products specified in the attached bid which the bidder proposes to supply to the State are led or produced in the "United States" as defined in Section 34.350, RsMO, then: (a) check the box at y, by item (or item number), the country other than the United States where each good or product is produced; and (c) check the boxes to the left of the paragraphs below if applicable and list the ms (or item numbers) in the spaces provided.						
It	em (d	or item number)	Location Where Item Manufactured or Produced						
			(attach an additional sheet if necessary)						
Ι	].	The following spequantities or in time	ecified goods or products cannot be manufactured or produced in the United States in sufficient me to me the contract specifications. Items (or item numbers):						
[	]	The following specified goods or products must be treated as manufactured or produced in the United States, in accordance with an existing treaty, law, agreement, or regulation of the United States, including a treaty between the United States and any foreign country regarding export-import restrictions or international trade. Items (or item numbers):							
		:	CERTIFICATION						

By submitting this document, completed as directed above, with a bid, the bidder certifies under penalty of making false declaration (Section 575.060, RsMO) that the information contained in this document if true, correct and complete, and may be relied upon by the State in determining the bidders qualifications under and in compliance with the Missouri Domestic Products Procurement Act.

The bidder's failure to complete and return this document with the bid as directed above will cause the State to presume the manufactured goods or products listed in the bid are not manufactured or produced in the United States, and the bid will be evaluated on that basis pursuant to Section 34.353.3(2), RsMO.

#### **Bagged Calcium Chloride (Dry)**

#### **BID BOND**

KNOW ALL MEN BY THES	E PRESENTS,	that we
	1 1 07	, as Principal and ,
as Surety are held and firmly bo	und unto the SI	ATE OF MISSOURI (acting by and through the Missouri Highways
and Transportation Commissi	ion) in the penal	Dollars (\$
to be paid to the <b>State of Misso</b> the State Road Fund, the Princip assigns, jointly and severally, fire	oal and Surety bi	issouri Highways and Transportation Commission, to be credited to inding themselves, their heirs, executors, administrators, successors, and
Sealed with our seals and dated	this	
THE CONDITION OF THIS	OBLIGATION	is such that:
WHEREAS, the Principal is su furnishing Bagged Calcium Ch	bmitting herewi lloride (Dry) as	th a bid to the Missouri Highways and Transportation Commission for set out in the bid to which this bond is attached.
and if said Principal shall prope contract and contract bond in co	rly execute and ompliance with the and Transpo	vs and Transportation Commission shall accept the bid of the Principal deliver to the Missouri Highways and Transportation Commission the he requirements of the bid, the specifications and the provisions of law, retation Commission, then this obligation shall be void and of no effect,
comply with any requirement as Missouri Highways and Transpe	s set forth in the ortation Commis	ment of the Missouri Highways and Transportation Commission, fail to preceding paragraph, then the State of Missouri acting through the ssion shall immediately and forthwith be entitled to recover the full sts, attorney's fees and any other expense of recovery.
(SEAL)		
		Principal
	· <u>_</u>	,
	By	C'arratage
		Signature
(SEAL)		
(SEZE)		Surety
	By	
		Attorney-in-Fact
NOTE: This bond must be	executed by the	PRINCIPAL and by a CORPORATE SURETY authorized to conduct
surety business in the		
•		•

#### NOTICE

The Department is interested in assisting Missouri governmental entities, etc. in purchasing equipment, various materials, and supplies that meet the MoDOT specifications.

Each bidder is asked to indicate below whether they would be willing to offer Bagged Calcium Chloride (Dry) listed in the attached "Request for Bid" for sale to these local political entities at the same bid price offered to this Department.

It is understood the Department will not issue purchase orders, accept delivery nor make payment for these items ordered by any of these agencies. It is further understood the price is based on the **Bagged Calcium Chloride (Dry)** meeting the Department specifications. Any added options, deletions, or extra freight costs would be negotiated between the local agency and the successful vendor.

Indicate below whether your company is willing to offer such cooperative purchasing for Missouri counties, cities or other political entities.

				•	
YES		NO			
		•			
If the price varies throughout the state on Department by price f.o.b. your location that would be offered as description		e of different deli	vėry destination	as, please indica	ate the
F.O.B. Location	<u></u>				
Indicate the deadline date that orders will be accepted.			<u>.                                    </u>	٠.	
	•				
COMPANY NAME		·			
ADDRESS			ato.		
PHONE NUMBER				·	٠
SIGNATURE	· · · · · · · · · · · · · · · · · · ·		···		
TITLE			_		
DATE					

#### STANDARD SOLICITATION PROVISIONS

- a. The Missouri Department of Transportation (MoDOT) reserves the right to reject any or all bids/quotes/proposals, and to accept or reject any items thereon, and to waive technicalities. In case of error in the extension of prices in the bid/quote/proposal, unit prices will govern.
- b. All bids/quotes/proposals must be signed with the firm name and by a responsible officer or employee. Obligations assumed by such signature must be fulfilled.
- c. By virtue of statutory authority, a preference will be given to materials, products, supplies, provisions and all other articles produced, manufactured, made or grown, within the State of Missouri.
- d. Time of delivery is a part of the consideration and, if not otherwise stated in the solicitation documents, must be stated in definite terms by the Bidder/Offeror and must be adhered to. If time varies on different items, the Bidder/Offeror shall so state.
- e. If providing bids/quotes/proposals for commodities, the Bidder/Offeror will state brand or make on each item. If bidding or proposing other than the make, model or brand specified, the manufacturer's name, model number or catalog number must be given.
- f. For bids/proposals of \$25,000 or more, no bids/proposals by telephone, telegram or telefax will be accepted.
- g. The date specified for the returning of bids/quotes/proposals is a firm deadline and all bids/quotes/proposals must be received at the designated office by that time. The Department does not recognize the U.S. Mail, Railway Express Agency, Air Express, or any other organization, as its agent for purposes of accepting proposals. All proposals arriving at the designated office after the deadline specified will be rejected.

#### **GENERAL TERMS AND CONDITIONS**

#### General Performance

a. This work is to be performed under the general supervision and direction of the Missouri Department of Transportation (MoDOT) and, if awarded any portion of the work, the Contractor agrees to furnish at his own expense all labor and equipment required to complete the work, it being expressly understood that this solicitation is for completed work based upon the price(s) specified and is not a solicitation for rental of equipment or employment of labor by MoDOT, and MoDOT is to have no direction or control over the employees used by the Contractor in performance of the work.

#### **Deliveries**

- a. Material arriving after 3:00 p.m. will not be unloaded until the following workday.
- b. If the prices bid herein include the delivery cost of the material, the Contractor agrees to pay all transportation charges on the material as FOB Destination. Freight costs must be included in the unit price bid and not listed as a separate line item.
- c. Any demurrage is to be paid by the Contractor direct to the railroad or carrier.

#### Nondiscrimination

- a. The Contractor shall comply with the Regulations relative to nondiscrimination in federally-assisted programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
- b. All solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of the Contractor's obligations under this contract and the Regulations, will be relative to nondiscrimination on the grounds of race, color, or national origin.
  - 1) Sanctions for Noncompliance: In the event of the Contractor's noncompliance with the nondiscrimination provisions of this contract, MoDOT shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:
    - withholding of payments to the Contractor under the contract until the Contractor complies, and/or,
    - ii. cancellation, termination or suspension of the contract, in whole or in part.

#### Contract/Purchase Order

- a. By submitting a bid/quote/proposal, the Bidder/Offeror agrees to furnish any and all equipment, supplies and/or services specified in the solicitation documents, at the prices quoted, pursuant to all requirements and specifications contained therein.
- b. A binding contract shall consist of: (1) the solicitation documents, amendments thereto, and/or Best and Final Offer (BAFO) request(s) with any changes/additions, (2) the Contractor's proposal and/or submitted pricing, and (3) the MHTC's acceptance of the proposal and/or bid by purchase order or post-award contract.
- c. A notice of award does not constitute an authorization for shipment of equipment or supplies or a directive to proceed with services. Before providing equipment, supplies and/or services, the Contractor must receive a properly authorized purchase order and/or notice to proceed.
- d. The contract expresses the complete agreement of the parties and performance shall be governed solely by the specifications and requirements contained therein. Any change, whether by modification and/or supplementation, must be accomplished by a formal contract amendment signed and approved by and between the duly authorized representative of the Contractor and the duly authorized representative of the MHTC, by a modified purchase order prior to the effective date of such modification. The Contractor expressly and explicitly understands and agrees that no other method and/or no other document, including correspondence, acts, and oral communications by or from any person, shall be used or construed as an amendment or modification.

#### Subcontracting

- a. It is specifically understood that no portion of the material or any interest in the contract, shall be subcontracted, transferred, assigned or otherwise disposed of, except with the written consent of MoDOT. Request for permission to subcontract or otherwise dispose of any part of the work shall be in writing to MoDOT and accompanied by documentation showing that the organization which will perform the work is particularly experienced and equipped for such work.
- b. Consent to subcontract or otherwise dispose of any portion of the work shall not be construed to relieve the Contractor of any responsibility for the

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production and delivery of the contracted work and the completion of the work within the specified time.

c. All payments for work performed by a subcontractor shall be made to the Contractor to whom the contract was awarded and the purchase order issued.

#### Invoicing and Payment

- a. MoDOT is exempt from paying Missouri Sales Tax, Missouri Use Tax and Federal Excise Tax. However, the Contractor may themselves be responsible for the payment of taxes on materials they purchase to fulfill the contract. A Federal Excise Tax Exemption Certificate will be furnished to the successful Bidder/Offeror upon request.
- b. Each invoice should be itemized in accordance with items listed on the purchase order and/or contract. The statewide financial management system has been designed to capture certain receipt and payment information. Therefore, each invoice submitted must reference the purchase order number and must be itemized in accordance with items listed on the purchase order. Failure to comply with this requirement may delay processing of invoices for payment.
- c. Unless otherwise provided for in the solicitation documents, payment for all equipment, supplies, and/or services required herein shall be made in arrears. The Missouri Highways and Transportation Commission (MHTC) shall not make any advance deposits.
- d. The MHTC assumes no obligation for equipment, supplies, and/or services shipped or provided in excess of the quantity ordered. Any authorized quantity is subject to the MHTC's rejection and shall be returned at the Contractor's expense.
- e. The MHTC reserves the right to purchase goods and services using the state-purchasing card.

#### Applicable Laws and Regulations

- a. The contract shall be construed according to the laws of the State of Missouri. The Contractor shall comply with all local, state, and federal laws and regulations related to the performance of the contract.
- b. The Contractor must be registered and maintain good standing with the Secretary of State of the State of Missouri and other regulatory agencies, as may be required by law or regulations. Prior to the issuance of a purchase order and/or notice to proceed, the Contractor may be required to submit to MoDOT a copy of their current Authority Certificate from the Secretary of State of the State of Missouri.
  - 1) Prior to the issuance of a purchase order and/or notice to proceed, all **out-of-state** Contractors **providing services** within the state of Missouri must submit to MoDOT a copy of their current Transient Employer Certificate from the Department of Revenue, in addition to a copy of their current Authority Certificate from the Secretary of State of the State of Missouri.
- c. The exclusive venue for any legal proceeding relating to or arising, out of the contract shall be in the Circuit Court of Cole County, Missouri.

#### **Executive Order**

- a. The Contractor shall comply with all the provisions of Executive Order 07-13, issued by the Honorable Matt Blunt, Governor of Missouri, on the sixth (6<sup>th</sup>) day of March, 2007. This Executive Order, which promulgates the State of Missouri's position to not tolerate persons who contract with the state engaging in or supporting illegal activities of employing individuals who are not eligible to work in the United States, is incorporated herein by reference and made a part of this Agreement.
  - 1) "By signing this Agreement, the Contractor hereby certifies that any employee of the Contractor assigned to perform services under the contract is eligible and authorized to work in the United States in compliance with federal law."
  - 2) In the event the Contractor fails to comply with the provisions of the Executive Order 07-13, or in the event the Commission has reasonable cause to believe that the contractor has knowingly employed individuals who are not eligible to work in the United States in violation of federal law, the Commission reserves the right to impose such contract sanctions as it may determine to be appropriate, including but not limited to contract cancellation, termination or suspension in whole or in part or both.
  - 3) The Contractor shall include the provisions of this paragraph in every subcontract. The Contractor shall take such action with respect to any subcontract as the Commission may direct as a means of enforcing such provisions, including sanctions for noncompliance.

#### Preferences

- In the evaluation of bids/quotes/proposals, preferences shall be applied in accordance with Chapter 34 RSMo. Contractors should apply the same preferences in selecting subcontractors.
- b. By virtue of statutory authority, RSMo. 34.076 and 34.350 to 34.359, a preference will be given to materials, products, supplies, provisions and all other articles produced, manufactured, made or grown within the State of Missouri. Such preference shall be given when quality is equal or better and delivered price is the same or less.
  - 1) If attached, the document entitled <u>"PREFERENCE IN PURCHASING PRODUCTS"</u> should be completed and returned with the solicitation documents.
  - 2) If attached, the document entitled "MISSOURI DOMESTIC PRODUCTS PROCUREMENT ACT" should be completed and returned with the solicitation documents. Applies if bid is Twenty-Five Thousand Dollars (\$25,000.00) or more.
- c. In the event of a tie of low bids, the MHTC reserves the right to establish the method to be used in determining the award

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#### Remedies and Rights

- a. No provision in the contract shall be construed, expressly or implied, as a waiver by the MHTC of any existing or future right and/or remedy available by law in the event of any claim by the MHTC of the Contractor's default or breach of contract.
- b. The Contractor agrees and understands that the contract shall constitute an assignment by the Contractor to the MHTC of all rights, title and interest in and to all causes of action that the Contractor may have under the antitrust laws of the United States or State of Missouri for which causes of action have accrued or will accrue as the result of or in relation to the particular equipment, supplies, and/or services purchased or produced by the Contractor in the fulfillment of the contract with the MHTC.
- c. In the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Contractor may request MoDOT to enter into such litigation to protect the interests of the MHTC, and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

#### **Cancellation of Contract**

- a. The MHTC may cancel the contract at any time for a material breach of contractual obligations or for convenience by providing the Contractor with written notice of cancellation. Should the MHTC exercise its right to cancel the contract for such reasons, cancellation will become effective upon the date specified in the notice of cancellation sent to the Contractor.
- b. If the MHTC cancels the contract for breach, the MHTC reserves the right to obtain the equipment, supplies, and/or services to be provided pursuant to the contract from other sources and upon such terms and in such manner as the MHTC deems appropriate and charge the Contractor for any additional costs incurred thereby.

#### Bankruptcy or Insolvency

a. Upon filing for any bankruptcy or insolvency proceeding by or against the Contractor, whether voluntary or involuntary, or upon the appointment of a receiver, trustee, or assigned the benefit or creditors, the Contractor must notify MoDOT immediately. Upon learning of any such actions, the MHTC reserves the right, at its sole discretion, to either cancel the contract or affirm the contract and hold the Contractor responsible for damages.

#### Inventions, Patents, and Copyrights

a. The Contractor shall defend, protect, and hold harmless the MHTC, its officers, agents, and employees against all suits of law or in equity resulting from patent and copyright infringement concerning the Contractor's performance or products produced under the terms of the contract.

#### Inspection and Acceptance

- a. No equipment, supplies, and/or services received by MoDOT pursuant to a contract shall be deemed accepted until MoDOT has had reasonable opportunity to inspect said equipment, supplies, and/or services.
- b. All equipment, supplies, and/or services which do not comply with the specifications and/or requirements or which are otherwise unacceptable or defective may be rejected. In addition, all equipment, supplies, and/or services which are discovered to be defective or which do not conform to any warranty of the Contractor upon inspection (or at any later time if the defects contained were not reasonably ascertainable upon the initial inspection) may be rejected.
- c. The MHTC reserves the right to return any such rejected shipment at the Contractor's expense for full credit or replacement and to specify a reasonable date by which replacements must be received.
- d. The MHTC's right to reject any unacceptable equipment, supplies, and/or services shall not exclude any other legal, equitable or contractual remedies the MHTC may have.

#### Warranty

- a. The Contractor expressly warrants that all equipment, supplies, and/or services provided shall: (1) conform to each and every specification, drawing, sample or other description which was furnished to or adopted by MoDOT, (2) be fit and sufficient for the purpose expressed in the solicitation documents, (3) be merchantable, (4) be of good materials and workmanship, and (5) be free from defect.
- b. Such warranty shall survive delivery and shall not be deemed waived either by reason of the MHTC's acceptance of or payment for said equipment, supplies, and/or services.

#### Status of Independent Contractor

a. The Contractor represents itself to be an independent Contractor offering such services to the general public and shall not represent itself or its employees to be an employee of the MHTC. Therefore, the Contractor shall assume all legal and financial responsibility for taxes, FICA, employee fringe benefits, workers' compensation, employee insurance, minimum wage requirements, overtime, etc., and agrees to indemnify, save and hold the MHTC, its officers, agents and employees harmless from and against any and all losses (including attorney fees) and damage of any kind related to such matters.

#### Indemnification

a. The Offeror shall defend, indemnify and hold harmless the Commission, including its members and department employees, from any claim or liability whether based on a claim for damages to real or personal property or to a person for any matter relating to or arising out of the Offeror's performance of its obligations under this Agreement.

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#### SPECIAL TERMS AND CONDITIONS

#### <u>Insurance</u>

- The Contractor shall purchase and maintain such insurance as will protect him from claims under workmen's compensation acts and other employee benefit acts, from claims for damages because of bodily injury, including death, and from claims for damages to property which may arise out of or result from the Contractor's operations under this Contract, whether such operations be by himself or by any Subcontractor or anyone directly or indirectly employed by any of them.
- This insurance shall be written for not less than any limits of liability specified as part of this contract, or required by law, whichever is the greater, and shall include contractual liability insurance as applicable to the Contractor's obligations under this contract. Unless otherwise specified, insurance limits shall be as follows:
  - Workmen's Compensation: Workers Compensation Insurance, including "Occupational Disease Act" requirements, must be maintained if required by law.
  - Public Liability (includes property damage and personal injury):
    - Not less than \$400,000 for any one person in a single accident or occurrence.
    - Not less than \$2,500,000 for all claims arising out of a single occurrence. ii.

#### Information and Reports

The Contractor shall provide all information and reports required by the Regulations, or Directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Missouri Department of Transportation or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations or Directives. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information the Contractor shall so certify to the Missouri Department of Transportation, or the Federal Highway Administration as appropriate, and shall set forth what efforts it has made to obtain the information.

#### Permits, Licenses and Safety Issues

- The contract price shall include any necessary permits and licenses required by law incidental to the work.
- The Contractor will comply with local laws involving safety in the prosecution of the work.

#### Failure to Execute Contract

Failure to execute the contract and file acceptable performance payment (Contract Bond) or cashier's check, bank money order or certified check within 15 days after the contract has been mailed to the bidder shall be just cause for the cancellation of the award and the forfeiture of the proposal guaranty. Award may then be made to the next lowest responsible bidder, or the work may be re-advertised and performed under contract or otherwise, as the Commission may decide. No contract shall be considered effective until it has been executed by all parties thereto.

#### **Notice to Proceed**

Within 30 days after the execution of the contract, a "Notice to Proceed" will be issued by the Department. A purchase order will be attached to the "Notice to Proceed," which will specify the date or dates that the Contractor can start delivery. These dates will be in accordance with the dates shown in the bid.

#### **Delivery - Additional Requirements**

- No deliveries will be made on Saturdays, Sundays and holidays unless specifically authorized by the engineer.
- The following days shall be construed as official holidays under the terms of the contract:

New Year's Day January I

Third Monday in January Martin Luther King, Jr.'s Birthday February 12 Lincoln's Birthday

Washington's Birthday

Third Monday in February May 8 Truman's Birthday

Memorial Day Last Monday in May July 4 Independence Day

Labor Day First Monday in September

Columbus Day Second Monday in October Veteran's Day November 11

Thanksgiving Day Fourth Thursday in November December 25 Christmas Day

When any of the above holidays falls on a Sunday, the holiday will be observed on the following Monday; when any of the above holidays falls on a Saturday, the holiday will be observed on the immediately preceding Friday.

#### Legal Weights

Provisions of the Missouri Statues relative to legal weights in regard to axle and gross weights, gross weights in relation to axle spacing and Supplementary Bridge limits all contained in Sections 304.180 and 304.190 RSMo are understood and will be abided by. The Department will not accept loads, which exceed legal weights.

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 It is understood and agreed that the Missouri Department of Transportation may prohibit the use of large trucks hauling heavy loads of material over low type bituminous roads and during adverse weather conditions.

#### Increase or Decrease Quantities

- a. The Highways and Transportation Commission reserves the right to increase or decrease the quantity of material twenty-five percent (25%), subject to the maximum quantity specified by the bidder in his proposal.
- b. The quantity finally ordered by the Commission will be furnished by the bidder at the same unit price.

#### Temporary Suspension of Work

- a. The **District Engineer** shall have authority to suspend work wholly or in part for such period or periods as may be deemed necessary when weather or other conditions are such that in the opinion of the engineer, the work may be done at a later time with advantage to the Department or for failure on the part of the Contractor to comply with any of the provisions of the Contract.
- b. If the Department suspends the work for its own advantages and not because of the Contractor's failure to comply with the Contract, the Contractor will be allowed an equal number of calendar days after the completion date for the completion of the work. The Department may at its discretion give the Contractor an extension of time for completing the work where the Contractor incurs delays for causes beyond his control.
- c. Normal rainfall is not considered a cause qualifying for an extension of time. Claim for extension of time for all causes must be submitted by the Contractor in writing within 30 Days after the claimed cause for the delay has ceased to exist.

#### **Cancellation of Contract**

- a. If the Contractor/supplier fails to carry out the performance of the work with sufficient workmen and equipment to insure the completion of the delivery within the time specified or becomes insolvent or is adjudicated a bankrupt or commits any act of bankruptcy or insolvency or allows any final judgment to stand against him for a period of ten (10) days, the Missouri Department of Transportation may give notice in writing by registered mail to the Contractor/supplier and the surety of such delay, neglect or default.
- b. If, within ten (10) days after such notice the Contractor/supplier does not proceed to remedy to the satisfaction of the Department's representatives the faults specified in said notice, or the surety does not proceed to take over the deliveries, the Department shall have full power and authority, without impairing the obligation of the Contractor/supplier under the contract or the surety under the bond, to take over the completion of the work and arrange for the shipment of any materials necessary to complete the work and the Contractor/supplier and the surety will be responsible for any additional costs incurred by the Department in obtaining the completion of the deliveries.

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MGS-92-06D (Page 1 of 5) (Rev. 07-14-06)

#### CALCIUM CHLORIDE MGS-92-06D

- **1.0 DESCRIPTION.** This specification covers calcium chloride for use as a de-icer for maintenance purposes.
- **2.0 MATERIAL.** Unless otherwise specified, calcium chloride may be furnished in either pellet or flake form. No adjustment in quantities will be made due to the form of material furnished.
- **2.1 Chemical Composition.** The minimum percent calcium chloride (CaCl<sub>2</sub>) shall be as follows, when tested in accordance with MoDOT Test Methods T48 and T26 included in Annex A of this specification:

Flake 74% Pellet 82%

**2.2 Gradation.** The gradation shall conform to the following requirements, when tested in accordance with this specification.

Sieve Size	Percent Passing (by weight)
3/8 inch	100
No. 4	80 - 100
No. 30	0 - 10

#### 3.0 PACKAGING AND MARKING.

- 3.1 The material shall be delivered in 50 60 pound moisture-proof bags on non-returnable pallets. Any pallet cost shall be included in the unit bid price.
- **3.2** The bags shall be plastic only and of a thickness suitable for the weight of the contents to avoid breakage under normal use, however not less than 5 mil plastic shall be used. Valve-fill bags are allowable, provided they meet the acceptance criteria.
- 3.3 The bags shall be legibly marked with:
- (a) Name of the manufacturer.
- (b) Name of the product.
- (c) Net weight.
- (d) Percentage of calcium chloride guaranteed by the manufacturer.
- 3.4 The pallets shall be shrink or stretch wrapped with plastic on the top and sides so that the pallet contents will completely shed water and are contained on the sides. No pallets will be acceptable if the wrapping is bonded to the contents.

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#### 4.0 TEST METHODS.

**4.1 Gradation.** Approximately 200 g, weighed to the nearest 0.1 g, shall be sieved in accordance with AASHTO T27, utilizing the 3/8-inch, No. 4, and No. 30 sieves together, with a bottom pan and a cover. Sieving shall be completed within a period of approximately one minute.

#### 5.0 ACCEPTANCE.

- **5.1** A lot shall consist of that quantity of material delivered to one location at one time.
- **5.2** Acceptance of the material will be based on satisfactory compliance with this specification as determined by samples and inspection deemed necessary by the engineer at the delivery site.
- 5.3 The material will be rejected if valve- fill openings are not self sealed suitably to prevent it from leaking out when the bag is stored on it's flat side, or if heat-sealed openings are not completely sealed, or if, upon opening the bags, it is found to be caked or sticky.
- 5.4 If samples fail to meet the material requirements on the basis of an initial sample, two additional samples will be taken from the lot and tested. Both of the additional samples must meet the requirements, or the lot will be rejected.

## ANNEX A Test Method MoDOT T48 DETERMINATION OF THE PURITY OF CALCIUM CHLORIDE

#### 1.0 SCOPE

**1.1** This method describes a procedure for determining the purity of Calcium Chloride intended for use in snow and ice removal.

#### 2.0 REAGENTS AND APPARATUS

**2.1** Reagents and Apparatus as described in MoDOT Test Method T26.

#### 3.0 PROCEDURE

**3.1** Weigh, to the nearest 0.1 mg, a sample of the material sufficient to contain 1.45 to 1.55 grams of anhydrous  $CaCl_2$ . Transfer to a 1000 ml volumetric flask and add 200 ml  $H_2O$ . Add a few drops of HCl, Specific Gravity 1.19, to clear the solution. Add by pipette, 25 ml of the  $MgCl_2$  solution. Make just alkaline to Methyl Red with  $NH_4OH$ , and dilute to volume. Determine the calcium by titrating a 20 ml aliquot, using the method described in MoDOT Test Method T26 which is included in Annex B of these specifications.

#### 4.0 CALCULATIONS

4.1 Calculate the percent Calcium Chloride as follows:

%  $CaCl_2 = \frac{ml \text{ of titration } x \text{ Fca } x \text{ 50 } x \text{ 0.0495}}{Wt. \text{ of Sample}}$ 

Report as:

% Calcium Chloride (CaCl<sub>2</sub>) to the nearest 0.1 percent

#### **ANNEX A (continued)**

## Test Method MoDOT T26 DETERMINATION OF CALCIUM CARBONATE AND MAGNESIUM CARBONATE IN LIME AND PIGMENT MATERIALS

#### 1. SCOPE

This method describes a procedure for determining the percent Calcium Carbonate and percent Magnesium Carbonate in Agricultural Lime and Calcium Carbonate paint pigments.

#### 2. REAGENTS AND APPARATUS

- (a) Sargent Malmstadt Automatic Spectro-Electro titrator, Model S-29700
- (b) Hexaver Solution

Dissolve 65 gm Hexaver (Disodium Dihydrogen 1, 2, Cyclohexanediaminetetracetate) in 2.0 liters of H<sub>2</sub>O

- (c) Magnesium Chloride Solution
  - Dissolve 8.00 gm MgCl<sub>2</sub>.6H<sub>2</sub>O Reagent Grade) in H<sub>2</sub>O and dilute to 1 liter
- (d) Calcon Indicator
  - Dissolve 0.30 gm Calcon in 50 ml of Methanol
- (e) EBT Indicator
  - Dissolve 0.30 gm of Erichrome Black T in 50 ml of Methanol
- (f) Potassium Hydroxide Solution
  - Dissolve 100 gm KOH (Reagent Grade) in 200 ml H<sub>2</sub>O

#### 3. STANDARDIZATION OF HEXAVER SOLUTION

- (a) Weigh 0.5801 gm Calcium Carbonate (Primary Standard Grade) and transfer to a 500 ml volumetric flask. Slowly add 15 ml HCL (Sp.Gr. 1.19), and boil for a few minutes to expel CO<sub>2</sub>. Add 2 gm NH<sub>4</sub>CL (Reagent Grade) and 200 ml H<sub>2</sub>O. Add with a pipette 10.00 ml of the MgCl<sub>2</sub> solution, and make alkaline to methyl red with NH<sub>4</sub>0H (Sp.Gr. 0.90). Cool to room temperature and dilute to volume.
- (b) Turn on the power switch of the automatic titrator and allow to warm up for about 15 minutes. Set the controls as follows:

Function Switch - Spectro

Polarity Switch - No. 2

Wavelength Selector - 650

The Hupp Cadmium Sulfide photocell should be used.

Pipette 25.00 ml aliquots into two 100 ml tall form beakers. To one beaker add 3 ml KOH Solution, 10 ml  $\rm H_2O$ , and 10 drops of Calcon indicator. Place the beaker on the titration platform and start the titrator. The burette should be adjusted so that the rate of delivery is about 45 seconds between the 35 ml mark and the 45 ml mark. When the titrator shuts off, record the burette reading as Tca. To the second beaker, add 10 ml  $\rm NH_4OH$  and 8 drops of EBT Indicator. Titrate as described above, and record the burette reading as Tmg.

Calculate the Calcium and Magnesium equivalents of the Hexaver as follows:

CaO Equiv. (Fca) = 
$$\frac{65}{\text{Tca}}$$

MgO Equiv. (Fmg) =  $\frac{\text{Fca}}{1.391}$ 

K =  $\frac{\text{Tmg}}{\text{Tca}}$ 

#### 4. PROCEDURE

Weigh 0.5000 gm sample of the material and transfer to a 250 ml beaker. Moisten with  $H_2O$  and add 10 ml HCL. Remove the insoluble matter,  $SiO_2$ , and  $R_2O_3$  by the methods set forth in ASTM C25-72. Collect all the filtrates and washings from the  $R_2O_3$  filtration in a 500 ml volumetric flask. Pipette 10 ml MgCl<sub>2</sub> solution into the flask, cool and dilute to volume.

Tritrate 25 ml aliquots for calcium and magnesium as described above in Section 3. Record the burette readings as  $T_{\text{ca}}$  and  $T_{\text{mg}}$ 

#### 5. CALCULATIONS

Calculate the percent Calcium Carbonate and percent Magnesium Carbonate as follows:

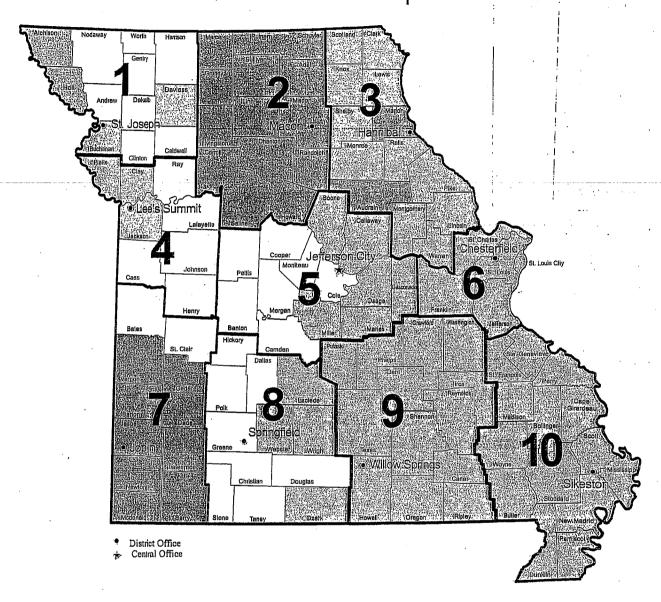
% 
$$CaCO_3 = F_{ca} \times T_{ca} \times 1.7848$$
  
%  $MgCO_3 = F_{mg} \times (T_{mg} - T_{ca} - K) \times 2.0915$ 

Report the results, to the nearest 0.1 percent, as follows:

% Calcium Carbonate (CaCO<sub>3</sub>)

% Magnesium Carbonate (MgCO<sub>3</sub>)

# Missouri Department of Transportation District Outline Map



COUNTY	DIST.
Adair Andrew Atchison	
Ваггу	
Barton	
Bates	7
Benton	,5
Bollinger	10
Boone	
Buchanan	l
Butler	10
Caldwell	1
Callaway	5
Callaway Camden	5
Cape Girardeau	
Carroll	2
Carter	9
Case	Δ

COUNTY	DIST.
Cedar	
Choriton	2
Christian	8
Clark	3
Clay	4
Clinton	1
Cole	5
Cooper	5
Crawford	9
Dade	7
Dallas	
Daviess	l
Dekalb	
Dent	9
Douglas	8
Dunklin	
Franklin	6
Gasconade	5
Gentry	

COUNTY	DIST.
Greene	8
Grundy	2
Harrison	
Henry	4
Hickory	
Holt	
Howard	
Howell	
lron	
Jackson	
Jasper	
Jefferson	
Johnson	
Knox	
Laclede	
Lafayette	
Lawrence	
Lewis	
Lincoln	
Lillicolli	

COUNTY	DIST.
Linn	
Livingston	2
McDonald	7
Macon	2
Madison	10
Maries	5
Marion	3
Mercer	
Miller	5
Mississippi	10
Moniteau	
Монгое	
Montgomery	3
Morgan	
New Madrid	
Newton	7 ·
Nodaway	1
Oregon	
Osage	

Ozark	COUNTY	DIST.
Perry	Ozark	8
Pettis	Pemiscot	10
Pettis	Реггу	10
Pike.         3           Platte.         4           Polk.         8           Pulnski.         9           Putnam.         2           Ralls.         3           Randolpli.         2           Ray.         4           Reynolds.         9           Ripley.         9           St. Charles.         6           St. Clair.         7		
Pike.         3           Platte.         4           Polk.         8           Pulnski.         9           Putnam.         2           Ralls.         3           Randolpli.         2           Ray.         4           Reynolds.         9           Ripley.         9           St. Charles.         6           St. Clair.         7	Pheips	9
Polk       8         Pulaski       9         Putnam       2         Rulls       3         Randoipi       2         Ray       4         Reynolds       9         Ripley       9         St. Charles       6         St. Clair       7		
Pulnski     9       Putnam     2       Rulls     3       Randolpli     2       Ray     4       Reynolds     9       Ripley     9       St. Charles     6       St. Cluir     7	Platte	4
Putnam     2       Rulls     3       Randolpli     2       Ray     4       Reynolds     9       Ripley     9       St. Charles     6       St. Cluir     7	Polk	8
Rulls       3         Randolpli       2         Ray       4         Reynolds       9         Ripley       9         St. Charles       6         St. Cluir       7	Pulaski	9
Randolph       2         Ray       4         Reynolds       9         Ripley       9         St. Charles       6         St. Clair       7	Putnam	2
Randolph       2         Ray       4         Reynolds       9         Ripley       9         St. Charles       6         St. Clair       7	Rulls	3
Ray       4         Reynolds       9         Ripley       9         St. Charles       6         St. Cluir       7		
Reynolds		
Ripley		
St. Charles6 St. Chair7		
St. Clair7		

Ste. Genevieve .....

COUNTY	DIST
St. Louis Saline	2
Schuyler Scotland	
Scott	
Shannon	
Shelby	
Stoddard	10
Stone	
Sullivan	
Taney	
Texas	
Vernon	
Warren Washington	3
Wayne	
Webster	
Worth	
Wright	8